

WHAT IS CLAIMED IS:

1. A transmitter device for communicating with a plurality of receiver devices in a cell through radio channels, said transmitter device comprising:
  - an OFDM transmission means;
  - a MC-CDMA transmission means; and
  - a control means for selecting either said OFDM transmission means or said MC-CDMA transmission means at slot time assigned to the receiver device in response to propagation conditions for the receiver device.
2. The transmitter device as claimed in claim 1, wherein said control means dynamically selects a modulation scheme and a channel coding rate in both said OFDM transmission means and said MC-CDMA transmission means, and further dynamically selects a spreading rate when using said MC-CDMA transmission means.
3. The transmitter device as claimed in claim 1, wherein said propagation conditions are a distance from said receiver device and a ratio of carrier power to interference signal power and noise power.
4. The transmitter device as claimed in claim 3, wherein said control means selects said OFDM transmission means when the distance is short and the a ratio of carrier power to interference signal power and noise power is high, and said MC-CDMA transmission means when the distance is long or the ratio of carrier power to interference signal power and

noise power is low.

5. The transmitter device as claimed in claim 3, wherein said propagation conditions further include a delay spread and a maximum Doppler frequency.

6. The transmitter device as claimed in claim 1, wherein said transmitter device further comprises a transmit power control means for controlling a transmit power at slot time assigned to the receiver device.

7. The transmitter device as claimed in claim 1, wherein said transmitter device further comprises a means for performing site diversity to the receiver device sited in a boundary of between said cells so that said transmitter device simultaneously transmits the same signal as other transmitter device in other cell.

8. A transmitting method of a device for communicating with a plurality of devices in a cell through radio channels, said transmitting method comprising the steps of:  
selecting either an OFDM scheme or a MC-CDMA scheme at slot time assigned to said receiver device in response to propagation conditions for said receiver device; and  
transmitting signal by using said selected scheme.

9. The transmitting method as claimed in claim 8, wherein said selecting step dynamically selects a modulation scheme and a channel coding rate, and further dynamically selects a

spreading rate when using said MC-CDMA scheme.

10. The transmitting method as claimed in claim 8, wherein said propagation conditions are a distance from the receiver device and a ratio of carrier power to interference signal power and noise power.

11. The transmitting method as claimed in claim 10, wherein said selecting means selects said OFDM scheme when said distance is short and a ratio of carrier power to interference signal power and noise power is high, and said MC-CDMA scheme when the distance is long or the ratio of carrier power to interference signal power and noise power is low.

12. The transmitting method as claimed in claim 10, wherein said propagation conditions further includes a delay spread and a maximum Doppler frequency.

13. The transmitting method as claimed in claim 8, wherein said method further comprises a step of controlling a transmit power control at slot time assigned to the receiver device.